ANNEXES

OPPORTUNITIES FOR NATIONAL LIFE CYCLE NETWORK CREATION AND EXPANSION AROUND THE WORLD
ANNEXES

Opportunities for National Life Cycle Network Creation and Expansion Around the World

With a special focus on mainstreaming and LCA database development in emerging economies, based on a global survey
Acknowledgements

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1. Annex 1: Websites of the regional networks and the national networks

Regional networks

Europe and Central Asia

- European Platform on Life Cycle Assessment
  http://eplca.jrc.ec.europa.eu/
- Nordic Life Cycle Association (NorLCA)
- Central and Southeast Europe LCA network (CASE-LCA)
  http://www.case-lca.org/

Asia/Pacific

- LCA Agrifood Asia Network
  http://www.lcaagrifoodasia.org/Network.html

Latin America and the Caribbean

- Iberoamerican LCA Network
  http://rediberoamericanadeciclodevida.wordpress.com/

Africa

- African Life Cycle Assessment Network (ALCANET)
  http://www.estis.net/sites/alcanet/

National networks

Europe and Central Asia

- avniR (Life Cycle Assessment Platform) (France)
  http://www.avniR.org/
- German Network on Life Cycle Inventory Data
  http://www.netzwerk-lebenszyklusdaten.de/cms/content
- LCA Center Association (Association of Hungarian LCA users)
  http://www.lcacenter.hu/
- LCA Center (Denmark)
- Polish Center for Life Cycle Assessment (PCLCA)
  http://pclca.com/
Opportunities for national life cycle network creation and expansion around the world:

- **Rete Italiana LCA (Italian LCA network)**
  
  http://www.reteitalianalca.it/

- **L'Association SCORE LCA (France)**
  
  http://www.scorelca.org/

- **Discussion Forum on Life Cycle Assessment (Switzerland)**
  
  http://www.lcaforum.ch/

- **The Swedish Life Cycle Center (CPM)**
  
  http://lifecyclecenter.se/

**North America**

- **The American Center for LCA**
  
  http://www.lcacenter.org/

**Asia/Pacific**

- **China Lifecycle Initiative (CNLCI)**
  
  http://www.cnlci.net/

- **Indian Society for LCA**
  
  http://www.neef.in/islca.html

- **India LCA Alliance**
  
  http://www.indialca.com/index.html

- **Korean Society of LCA (KSLCA)**
  
  http://www.kslca.com/

- **LCA Malaysia**
  
  http://lcamalaysia.sirim.my/

- **LCA Society of Japan**
  
  
  http://lcadesnetlanka.org/index.html

- **Life Cycle Assessment Research Center (LCARC) (South Korea)**

- **Thai LCA network**
  
  http://www.thailca.net/

- **Australian LCA Society (ALCAS)**
  
  http://www.alcas.asn.au/

- **Life Cycle Association New Zealand (LCANZ)**
  
  http://www.lcanz.org.nz/
Latin America

- Argentinian LCA network
  https://redargentinadehuellahidrica.wordpress.com/

- Association for Life Cycle Assessment in Latin America (ALCALA) Costa Rica
  http://www.alcalacr.org/

- Colombian LCA network
  http://www.redacvcolombia.blogspot.fr/

- Ecuadorian network
  http://www.ciclodevida.iner.ec/es-ES/

- Peruvian LCA network
  http://www.red.pucp.edu.pe/ciclodevida/

- Red ACV Chile (Chilean LCA network)
  https://rediberoamericanaDECiclodevida.wordpress.com/enlaces/

- Red Mexicana de Ciclo de Vida
  http://sitios.ingen.unam.mx/CicloDeVida/Default.htm
## 2. Annex 2: Survey results with regard to response rate and participation

<table>
<thead>
<tr>
<th>No</th>
<th>Country</th>
<th>Number Emails</th>
<th>Number responses</th>
<th>Res. % of Emails</th>
<th>More than min.</th>
<th>Min.</th>
<th>Min. % Emails</th>
</tr>
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<tbody>
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<td>yes</td>
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</tbody>
</table>

### Target countries

**Latin America**

| a | Chile           | 231           | 38               | 16%              | yes            | 10   | 4%             |
|   | Perú            | 49            | 8                | 16%              | yes            | 2    | 4%             |

**Asia/ Pacific**

| b | Malaysia        | 41            | 3                | 7%               | yes            | 2    | 5%             |
|   | Thailand        | 70            | 6                | 9%               | yes            | 2    | 3%             |
| c | Philippines     | 8             | 1                | 13%              | yes            | 1    | 13%            |
| d | Africa          | 125           | 12               | 10%              | yes            | 6    | 5%             |

**Egypt**

| e | 10             | 2             | 20%              | yes            | 2    | 20%            |

**Morocco**

| f | 4              | 2             | 50%              | yes            | 1    | 25%            |

**Europe**

| g | 85             | 6             | 7%               | yes            | 3    | 4%             |

**Total (target incl. G20)**

| 2 | 713            | 76            | 11%              | yes            | 31   | 4%             |

**Total (target without G20)**

| 3 | 223            | 26            | 12%              | yes            | 12   | 5%             |

### G20 countries/ Target countries

**Group 1**

| 4 | 293            | 21            | 7%               | yes            | 9    | 3%             |

**India**

| 5 | 97             | 7             | 7%               | yes            | 3    | 3%             |

**Russian Federation**

| 6 | 111            | 8             | 7%               | yes            | 3    | 3%             |

**South Africa**

| 7 | 76             | 5             | 7%               | yes            | 2    | 3%             |

**Turkey**

| 8 | 197            | 29            | 15%              | yes            | 10   | 5%             |

**Group 3 & 5 (target)**

| 9 | 100            | 19            | 19%              | yes            | 4    | 4%             |

**Brazil**

| 10 | 41            | 7             | 17%              | yes            | 2    | 5%             |

**China**

| 11 | 47            | 1             | 2%               | no             | 3    | 6%             |

**South Africa**

| 12 | 9             | 2             | 22%              | yes            | 1    | 11%            |

**Total (G20/ target)**

| 14 | 490           | 50            | 10%              | yes            | 19   | 4%             |

### G20 countries

**Group 1**

| 15 | 357           | 31            | 9%               | yes            | 13   | 4%             |

**Australia**

| 16 | 33            | 8             | 24%              | yes            | 2    | 6%             |

**Canada**

| 17 | 75            | 7             | 9%               | yes            | 3    | 4%             |

**United States**

| 18 | 174           | 13            | 7%               | yes            | 6    | 3%             |

**United Kingdom**

| 19 | 75            | 3             | 4%               | yes            | 2    | 3%             |

**Group 4**

| 20 | 445           | 36            | 8%               | yes            | 17   | 4%             |

**France**

| 21 | 142           | 9             | 6%               | yes            | 5    | 4%             |

**Germany**

| 22 | 160           | 9             | 6%               | yes            | 6    | 4%             |

**Italy**

| 23 | 84            | 8             | 10%              | yes            | 3    | 4%             |

**Spain**

| 24 | 59            | 10            | 17%              | yes            | 3    | 5%             |

**Group 3 & 5 (other)**

| 25 | 104           | 15            | 14%              | yes            | 6    | 6%             |

**Argentina**

| 26 | 22            | 5             | 23%              | yes            | 2    | 9%             |

| 27 | Saudi Arabia   | 1             | 0                | no             | 1    | 100%           |

**Japan**

| 28 | 66            | 4             | 6%               | yes            | 2    | 3%             |

**South Korea**

| 29 | 15            | 6             | 40%              | yes            | 1    | 7%             |

**Total (G20 incl. target)**

| 30 | 1396          | 132           | 9%               | yes            | 55   | 4%             |

**Total (G20 without target)**

| 31 | 906           | 82            | 9%               | yes            | 36   | 4%             |

### Total and other countries

**Total (Target + G20)**

| 32 | 1619          | 158           | 10%              | yes            | 67   | 4%             |

**Other countries**

| 33 | 893           | 25            | 3%               | no             | 38   | 4%             |

**Total (Target + G20 + Other)**

| 34 | 2512          | 183           | 7%               | yes            | 105  | 4%             |
3. Annex 3: Survey based country fact sheets

3.1. Europe and Central Asia

Group of countries: European Union [53 respondents]

Status of mainstreaming

Leading organization for LCA promotion: Mainly by Academia, consultants and industry

LC research: Many of good quality training courses and seminars on LCA and other life cycle approaches are offered by academics in Europe.

Market for LC services: Fully developed

LCA software penetration: Mainly international LCA software is used. Local software is also being used or developed in some countries in Europe.

Research on LCA and related topics: In most cases LCIA methods with up to 14 impact category indicators that have been developed by international experts have been implemented. Local LCIA impact category indicators have also been developed and used.

LCA studies led by: Mainly by academics and big companies

LCA based policies and drivers: No clear information on the use of LCA in legislation. The main drivers for the uptake of LC approaches are: Environmental Product Declarations, Product Environmental Footprinting, Critical hotspots identification in the supply chain by retailers and big companies, Public procurement regulations, Innovation efforts by companies of any size, Marketing and reputational activities, Sustainability Reporting

Funding required to bring the LCA work to the next level: there is a need for overall funding and for work on databases in the region.

Network characterization

Network availability: Regional LCA networks are available in Europe: European Platform on Life Cycle Assessment, Nordic Life Cycle Association (NorLCA) and Central and Southeast Europe LCA network (CASE-LCA).

The European Platform on LCA is European Commission’s project coordinated by the Commission’s Joint Research Centre (JRC), Institute for Environment and Sustainability (IES) in collaboration with the Environment Directorate General. It has been established to support the development of scientifically robust, consistent and quality-assured life cycle methodology and data.

The NorLCA is funded in Helsinki in 2004. It comprises individuals, companies and organizations from Nordic regions working with life cycle approaches and it serves as a mutual platform for industry, authorities, R&D institutions, NGOs and other. It is engaged in activities such as life cycle thinking, life cycle design, life cycle management, life cycle costs, life cycle assessment, product oriented management, green procurement, green marketing and so on.

CASE-LCA is an LCA network of scientific and research institutes and LCA centers from Central and Southeast Europe. Its members are from individual, companies and organizations who are or would like to practice life cycle approaches.
Network activity: European Platform on Life Cycle Assessment is mainly engaged in activities that responds business and policy needs for social and environmental assessments of supply chains and end-of-life waste management. NorLCA is very active. Its main activity is organizing the annual Nordic multidisciplinary and interactive symposium in which LCA practitioner in the region gather to discuss, listen, learn and be inspired by each other. CASE-LCA’s main activities are organizing annual multidisciplinary, and interactive symposium, where professionals within the field meet for discussion. It also organizes the annual symposia that addresses designers, product developers, architects, economists, LCA-specialists and others with an interest in life cycle thinking.

Commination platform:
http://eplca.jrc.ec.europa.eu/
http://www.case-lca.org/

Database
Database availability: Regional database is available, for example European Life Cycle Database, in addition to national databases such as in France and commercial database such as Gabi.
Country: France [9 respondents]

Status of mainstreaming

Leading organization for LCA promotion: academia, consultant, industry, NGO and government
LC research: Many LCA studies are provided by academics and big companies.
Market for LC services: fully developed
LCA software penetration: international software
Research on LCA and related topics: LCIA methods with up to 14 impact category indicators have been implemented.

LCA based policies and drivers: No clear answer on the use of LCA in the legislation. Type III labeling/ environmental product declarations, product environmental footprinting, critical hotspots identification in the supply chain by retailers and big companies, public voluntary commitments, innovation efforts by companies of any size, sustainability reporting, demands from the financial sector, legal requirements, marketing and reputational activities are the main rivers behind the uptake of life cycle approaches.

Funding required to bring the LCA work to the next level: up to up to US$1,000,000

Network characterization

Network availability: Different LCA networks exist, for example, [avnIR] LCA platform, ScoreLCA and EcoSD.

The objective of the [avnIR] LCA platform operates from Northern France to help businesses from all sectors develop better products, systems and services through life cycle management. [avnIR] is a collaborative platform and resource center, bringing together expertise from business clusters, research institutions, universities, local authorities and government bodies. The [avnIR] LCA Conferences bring together experts, scientists, businesses and policy makers of a wide range of sectors: textiles, construction, food, transportation, etc. over 2 days.

EcoSD is formed by companies, academics and consultants and organizes regular expert meetings and PhD schools. This initiative has the ambition to help a global sustainable development process.

ScoreLCA, a French association is founded in 2012 with an approximately 10-50 organizational members from environmental NGOs, academic institutions, consultancies, small-sized companies, multilateral organizations and ADEME. It aims at promoting and organizing cooperation between industrial, institutional or scientific actors.

Network activity: The networks are very active and engaged in different activities such as research on LCA methodology, benchmarking on methodologies and case studies, workshop and conferences, life cycle management support for organizations, financing LCA research and studies and sharing LCA knowledge.

Communication platform:

www.avnir.org,
http://www.ecosd.fr
http://www.scorelca.org
Database

Database availability: National database is available (Base IMPACTS [http://www.base-impacts.ademe.fr/], and AGRIBALYSE [www.ademe.fr/agribalyse])

Data format: Most data are in ILCD format but also EcoSpold used.

Database based on statistical IO data: Not available

Central control: ADEME

Funding needed for work on databases: more than 50,000$ funding is needed for work on databases.
Country: Germany [9 respondents]

Status of mainstreaming
Leading organization for LCA promotion: academia, consultant, industry, NGO and government
LCA research: Many LCA studies are provided by academics and big companies.
Market for LC services: Fully developed
LCA software penetration: International and local LCA software
Research on LCA and related topics: LCIA methods with up to 14 impact category indicators that have been developed by international recognized experts have been used.
LCA based policies and drivers: No clear answer on the use of LCA in the legislation. Type III labeling/ environmental product declarations, product environmental footprinting, critical hotspots identification in the supply chain by retailers and big companies, innovation efforts by companies of any size, marketing and reputational activities, sustainability reporting, public voluntary commitments, legal requirements, public procurement regulations, environmental policies and legislation are the main drivers for the uptake of LC approaches.
Funding required to bring the LCA work to the next level: more than US$1,000,000

Network characterization
Network availability: National LCA network exists. The Life Cycle data network was formed from 2003 to 2008. It has mainly organizational members of 10-50 from EPAs, environmental NGOs, branch organisations, multilateral organisations, academic institutions, consultancies, small to large size companies and standardization organisations. They are not yet legal entity.
Network activity: The network has some activities, these are workshops, LCA method, LCA data and applications of LCA studies.
Communication platform: There is an official web page (www.netzwerk-lebenszyklusdaten.de).

Database
Database availability: Regional database is available (Ökobau.dat, http://www.nachhaltigesbauen.de/baustoff-und-gebaeudedaten/oekobaudat.html)
Data format: ILCD
Database based on statistical IO data: Not available
Central control: German Federal Institute for Research on Building, Urban Affairs and Spatial Development
Funding needed for work on databases: Up to US$1,000,000 funding is needed for work on databases.
Country: Italy [8 respondents]

Status of mainstreaming

Leading organization for LCA promotion: academia, consultant, industry, NGO and government

LCA research: Many LCA studies are provided by academics and big companies.

Market for LC services: Developing

LCA software penetration: International LCA software

Research on LCA and related topics: LCIA methods with up to 14 impact category indicators are implemented.

LCA based policies and drivers: No clear answer on the use of LCA in the legislation. Type III labeling/ environmental product declarations, product environmental footprinting, critical hotspots identification in the supply chain by retailers and big companies, public procurement regulations, innovation efforts by companies of any size, marketing and reputational activities, sustainability reporting and public voluntary commitments are the main drivers for the uptake of LC approaches.

Funding required to bring the LCA work to the next level: up to US$1,000,000

Network characterization

Network availability: LCA network is available, Rete Italiana LCA (Italian LCA network). It is founded in 2012 by ENEA, Polytechnic University of Milan, University of Bari, University of Palermo, University of Chieti-Pescara, University of Padua and CIRCC. It has about 100-250 individual members from academic institutions, consultancies, medium-sized companies, large companies, environmental NGOs, multilateral organizations and others.

Network activity: The network has some activities. It is engaged in activities such as publishing a book, preparing guidelines for the agricultural and food sector, LCA training courses, organizing annual national conference, seminars and workshops, awards for young researchers, working groups carrying out research on specific industries and so on.

Communication platform: yes, http://www.reteitalianalca.it/

Database

Database availability: Yet there is no national database, but academic or research organization, national life cycle network have plan to develop a database.
Country: Russia [1 respondent]

**Status of mainstreaming**

Leading organization for LCA promotion: Academia and big companies

LC training: No offer of courses or seminars on LCA related topics has been identified.

Market for LC services: Still limited.

LCA software penetration: International commercial softwares are used mainly for lectures reviews.

Research on LCA and related topics: Very few research cases on LCA data have been identified.

LCA studies led by: Some LCA studies are available and have been led by the academia.

LCA based policies and drivers: Policies related to the food sector are in place based on LC approaches; main drivers are the requirements on product environmental footprinting information coming from type III labeling and environmental product declarations.

Funding required to bring the LCA work to the next level: up to US$ 100,000 mainly in connection with database development.

**Network characterization**

Network availability: There no a life cycle network.

Network activity: Not applicable

Communication platform: Not applicable

**Database**

Database availability: There is no a national database. To ensure best practice for LCA dataset development and interoperability of LCA databases at the international level in the country, one respondent suggested to use follow the procedures of an existing LCA database.

Central control: Not applicable.

Data format: Not applicable

Database based on statistical IO data: Not available.

Funding needed for work on databases: up to US$ 100,000.
Country: Spain [10 respondents]

Status of mainstreaming
Leading organization for LCA promotion: Academia, consultant and government
LCA research: Some, mainly by academics
Market for LC services: Developing
LCA software penetration: International software and local software
Research on LCA and related topics: LCIA methods with up to 14 impact category indicators are implemented.
LCA based policies and drivers: no use of LCA in the legislation. Type III labeling/ Environmental Product Declarations, Product Environmental Footprinting, Innovation efforts by companies of any size, Legal requirements, Marketing and reputational activities, Sustainability Reporting, Critical hotspots identification in the supply chain by retailers and big companies, Public procurement regulations, Public voluntary commitments, demand at central-northern European markets (larger companies or final costumer), Innovation efforts by companies of any size and Demands from the financial sector, are the main drivers for the uptake of LC approaches.

Network characterization
Network availability: Available, the Spanish LCA network and Catalan LCA network. Members are individual or organization from academic institutions, consultancies, companies and environmental NGOs background.
Network activity: it is undertaking some activities such as organizing symposium, seminars and workshops; high quality training; scientific and ethical standards; involved in the international network and annual meetings.
Commination platform: the Catalan LCA network has an official web site (http://www.acv.cat/index.cfm).

Database
Database availability: LCA database developed by academic or research organization and national life cycle network exist in Spain, LCADB.sudoe (http://lcadb.sudoe.ecotech.cat/).
Data format: EcoSpold and ILCD
Database based on statistical IO data: Not available
Central control: Sostenipra (http://www.sostenipra.cat/en/)
Funding needed for work on databases: up to 100,000$
**Country: Switzerland [2 respondents]**

**Status of mainstreaming**

Leading organization for LCA promotion: Academia, Consultant

LCA research: Many, mainly by academics and big companies

Market for LC services: Fully developed

LCA software penetration: International software and local software

Research on LCA and related topics: LCIA methods with up to 14 impact category indicators are implemented.

LCA based policies and drivers: LCA is used in various legislations, especially in policies with regards to natural resources, including water and energy, chemicals, materials and textiles, building and construction, transportation, food, ICT and electronics. Drivers for the LCA market have been innovation efforts by companies of any size, marketing and reputational activities, and critical hotspots identification in the supply chain by retailers and big companies.

**Network characterization**

Network availability: Available, the Discussion Forum on Life Cycle Assessment. Members are individual from academic institutions, consultancies, large companies and branch organisations.

Network activity: it is undertaking some activities such as work around ecoinvent LCA database, water footprint research and standardization.

Communication platform: the Discussion Forum on Life Cycle Assessment has an official web site (http://www.lcaforum.ch/)

**Database**

Database availability: LCA database developed by academic or research organization and a national life cycle network exist in Switzerland, ecoinvent (http://www.ecoinvent.org/).

Data format: EcoSpold

Database based on statistical IO data:

Central control: Ecoinvent (http://www.ecoinvent.org/)

Funding needed for work on databases: no funding needed from international cooperation
Country: Turkey [5 respondents]

Status of mainstreaming

Leading organization for LCA promotion: Academia and consultants

LC research: Multiple, more than two training courses and seminars on LCA and other life cycle approaches are available Turkey.

Market for LC services: Developing

LCA software penetration: International LCA software

Research on LCA and related topics: Limited use of Impact Category Indicators

LCA studies are led by: There are some LCA studies and they are led by academics.

LCA based policies and drivers: There are no policies in place based on LC approaches; main drivers for the uptake of LC approaches are: type III labeling/ environmental product declarations, public procurement regulations, innovation efforts by companies of any size, marketing and reputational activities, sustainability reporting, product environmental footprinting and critical hotspots identification in the supply chain by retailers and big companies,

Funding required to bring the LCA work to the next level: An overall funding of up to 100,000$ is needed.

Network characterization

Network availability: Not available

Database

Database availability: Plan to develop
Country: United Kingdom [3 respondents]

Status of mainstreaming

Leading organization for LCA promotion: LCA approach in UK is mostly promoted by academia and consultant

LC research: There are many LCA studies provided by academics and big companies.

Market for LC services: Developing

LCA software penetration: International LCA software is most widely used.

Research on LCA and related topics: LCIA methods with up to 14 impact category indicators have been used.

LCA based policies and drivers: No clear answer on the use of LCA in the legislation. The main drivers behind the uptake of life cycle approaches are: type III labeling/ environmental product declarations, product environmental footprinting, critical hotspots identification in the supply chain by retailers and big companies, public procurement regulations, innovation efforts by companies of any size, marketing and reputational activities, sustainability reporting.

Funding required to bring the LCA work to the next level: more than US$1,000,000

Network characterization

Network availability: No clear information on the availability of network in UK.

Database

Database availability: No national database
3.2. North America

Country: Canada [7 respondents]

Status of mainstreaming

Leading organization for LCA promotion: Academia and consultant

LC research: There exist many LCA studies provided by academics and big companies.

Market for LC services: Developing

LCA software penetration: International and local LCA software

Research on LCA and related topics: LCIA methods with up to 14 impact category indicators that have been developed by international recognized experts have been used. Local LCIA impact category indicators have been also developed and implemented.

LCA based policies and drivers: No policies are in place based on LC approaches. The main drivers for the uptake of LC approaches are: Product environmental footprinting, public procurement regulations, innovation efforts by companies of any size, marketing and reputational activities, sustainability reporting, critical hotspots identification in the supply chain by retailers and big companies, sector activity - e.g. green building movement, retail, apparel, public voluntary commitments, demands from the financial sector, legal requirements and type III labeling/environmental product declarations.

Funding required to bring the LCA work to the next level: More than US$1,000,000

Network characterization

Network availability: There is no national network but there are different regional networks that have been formed from 2003 and 2010. They have about 10-100 individual and organizational members that come from academic institutions, consultancies, environmental NGOs, branch organizations, multilateral organizations, small-to-large sized companies and other backgrounds. They are not yet legal entity.

Network activity: The networks are very active and engaged in different activities: mainly organizing workshops, conference, LCA courses and training, and working groups, research projects, industrial initiatives and consortium, and independent association.

Communication platform: They have no communication platform.

Database

Database availability: Regional database is available.

Data format: EcoSpold

Database based on statistical IO data: Not available

Central control: CIRAIG is the coordinator (http://www.ciraig.org/en/bd-icv_qc.php) of the database

Funding needed for work on databases: Up to US$1,000,000 funding is needed for work on databases.
Country: United States [13 respondents]

Status of mainstreaming

Leading organization for LCA promotion: academia, consultant, government and industry

LC research: Many LCA studies are provided by academics and big companies.

Market for LC services: Fully developed

LCA software penetration: International and local LCA software

Research on LCA and related topics: LCIA methods with up to 14 impact category indicators have been implemented.

LCA based policies and drivers: No clear answer on the use of LCA in the legislation. Type III labeling/ environmental product declarations, product environmental footprinting, public procurement regulations, innovation efforts by companies of any size, marketing and reputational activities, demands from the financial sector, critical hotspots identification in the supply chain by retailers and big companies, sustainability reporting, green advocacy, public voluntary commitments are the main rivers behind the uptake of life cycle approaches.

Funding required to bring the LCA work to the next level: more than US$1,000,000

Network characterization

Network availability: National network exists. The American Center for Life Cycle Assessment (ACLCA) that has been formed since 2001 with individual and industry members. It has more than 500 members that come from EPAs, environmental NGOs, academic institutions, consultancies, small companies, medium-sized companies and large companies.

Network activity: The network is very active and engaged in different activities such as annual meetings, trainings and regular webinars, certification, annual LCA conference, education, outreach, lobbying, hotspots assessments, sustainability KPIs, communication between retailers and consumer brands.

Communication platform: It has an official web page (http://www.lcacenter.org/).

Database

Database availability: National database is available (LCA Digital Commons (http://www.lcacommons.gov/) and U.S. LCI Database (http://www.nrel.gov/lci/), for example).

Data format: Most data are in EcoSpold format.

Database based on statistical IO data: Available, for example, IO data from Green Design Institute of Carnegie Mellon, (http://www.eiolca.net/).

Central control: USDA and National Renewable Energy Lab

Funding needed for work on databases: Up to US$1,000,000 funding is needed for work on databases.
3.3. Asia/ Pacific

Country: Australia [8 respondents]

Status of mainstreaming

Leading organization for LCA promotion: Academia and consultants

LC research: Many good quality training courses and seminars by several universities and research organization

Market for LC services: Developing

LCA software penetration: International and local LCA software are mostly used.

Research on LCA and related topics: From limited use of impact category to LCIA methods up to 14 impact categories Local LCIA development has also started.

LCS studied led by: academia and big companies

LCA based policies and drivers: No policies are in place based on LC approaches. Main drivers for the uptake of LC approaches are: Type III labeling/ environmental product declarations, marketing and reputational activities, sustainability reporting, product environmental footprinting, public voluntary commitments, innovation efforts by companies of any size and agriculture.

Funding required to bring the LCA work to the next level: up to US$1,000,000

Network characterization

Network availability: A legal entity LC network has been formed in Australia since 2001. About 10 – 100 individual and corporate members from academic institutions, consultancies, small to large-sized companies, branch organizations, standardization organizations, environmental NGOs, government participate in the network.

Network activity: The network is very active and is engaged in different activities such as: hosting type 3 program, certifying practitioners, development of Australian LCI database framework, methodological guidance, professional development, bi-annual conference, Australasian EPD program, ecolabelling, and so on.

Communication platform: It has official web page (www.alcas.asn.au).

Database

Database availability: A national database was developed by the Australian Life Cycle Assessment Society (ALCA).

Central control: ALCA is the central control, but multiple actors contributing data to the database.

Data format: EcoSpold

Database based on statistical IO data: Available

Funding needed for work on databases: Up to US$1,000,000 funding is needed for work on databases.
Country: China [1 respondent]

**Status of mainstreaming**

Leading organization for LCA promotion: Consultant
LCA research: Some, mainly by academics
Market for LC services: Developing
LCA software penetration: no information
Research on LCA and related topics: no information
LCA based policies and drivers: no information. Type III labeling/ environmental product declarations

Marketing and reputational activities are the main drivers for the uptake of LC approaches.

Funding required to bring the LCA work to the next level: up to US$1,000,000

**Network characterization**

Network availability: A national network with about 100-250 individual members from academic institutions has been formed since 2008. It organizes Chinese conference on LCM (CLCM).

Communication platform: No official web page

**Database**

Database availability: National LCA datable has been developed by academic or research organization (Chinese Core Life Cycle Database (CLCD) (www.ike-global.com)).

Data format: Not clear
Database based on statistical IO data: available
Central control: IKE China

Funding needed for work on databases: up to 100,000$
Country: India [7 respondents]

Status of mainstreaming
Leading organization for LCA promotion: Consultants
LC training: Still few and mainly on LCA, LCM, LCC and environmental footprinting
Market for LC services: Limited
LCA software penetration: International commercial software and the open LCA one are used.
Research on LCA and related topics: Research has focused on energy related topics as well as on energy intense sectors such as steel and cement ones (source: Journal of LCA).
LCA studies led by: Few LCA studies are available and have been led by consultants for big companies or associations.
LCA based policies and drivers: No policies in place based on LC approaches; main drivers are the need for solid results for critical hotspots identification in the supply chain by retailers and big companies and innovation efforts as well as for sustainability reporting and marketing and reputational activities.
Funding required to bring the LCA work to the next level: Funding of up to US$ 1,000,000 is needed.

Network characterization
Network activity: There is a limited outreach considering the size of the country. Especially the India LCA Alliance has been very active since 2011 on information dissemination, community networking and workshops organization. The first network is led by the academia and the second by the private sector.
Communication platform: Both websites are the following: [http://www.neef.in islca.html] and [http://www.indialca.com/index.html],

Database
Database availability: There is no a national database but its development is in the planning phase and will be led by industry associations. To ensure best practice for LCA dataset development and interoperability of LCA databases at the international level in your country, respondents suggest to use the Global Guidance Principles on LCA databases and provide the datasets in one LCA format.
Central control: It is not decided yet.
Data format: No data format has been chosen yet.
Database based on statistical IO data: One respondent added that there is an I/O database for the country.
Funding needed for work on databases: Funding between US$ 100,000 and US$ 1,000,000 needed.
Country: Indonesia [2 respondents]

**Status of mainstreaming**

Leading organization for LCA promotion: Academia, consultant, industry, government and NGO

LC research: Only LCA

Market for LC services: Developing

LCA software penetration: International software is used. Local software is also being used or developed.

Research on LCA and related topics: Limited use of Impact Category Indicators

LCA studies are led by: Only few studies

LCA based policies and drivers: No clear information. Type III labeling/ environmental product declarations, product environmental footprinting, critical hotspots identification in the supply chain by retailers and big companies, sustainability reporting, legal requirements and marketing and reputational activities are the main drivers for the uptake of LC approaches.

Funding required to bring the LCA work to the next level: Overall funding of up to US$1,000,000 is needed.

**Network characterization**

Network availability: The Indonesia Life Cycle Assessment Network has only recently been founded and has the status of a legal entity. More information at: [http://www.ilcan.or.id/](http://www.ilcan.or.id/)

Network activity: Despite its recent establishment, the network is rather active and will organize the 2nd ILCAN Conference Series on Life Cycle Assessment (ICSoLCA) in November 2016.

**Database**

Database availability: Plan to develop
Country: Japan [4 respondents]

Status of mainstreaming

Leading organization for LCA promotion: academia, consultant and government
LCA research: Many, mainly by academics and big companies
Market for LC services: Developing
LCA software penetration: Some international software, but mostly local software
Research on LCA and related topics: LCIA methods with up to 14 impact category indicators are implemented.
LCA based policies and drivers: no clear information on the use of LCA in the legislation. Type III labeling/ environmental product declarations, product environmental footprinting, innovation efforts by companies of any size, marketing and reputational activities, sustainability reporting, demands from the financial sector, critical hotspots identification in the supply chain by retailers and big companies, public procurement regulations and public voluntary commitments are the main drivers for the uptake of LC approaches.
Funding required to bring the LCA work to the next level: up to US$1,000,000

Network characterization

Network availability: A national network, The Life Cycle Assessment Society of Japan (JLCA), is founded in 1995. It has about 250-500 individual and organizational members from environmental NGOs, standardization organizations, academic institutions, consultancies, small companies, medium-sized companies and large companies.
Network activity: The network is very active and is undertaking activates such as database management, research, seminar, newsletter, award, lectures, conferences, workshops and experiences exchange in LCA.
Commination platform: It has official web page [http://lca-forum.org/english/] and [http://ilcaj.sntt.or.jp/]

Database

Database availability: There are two databases, the J-LCA-database ([http://lca-forum.org/]) by the LCA Society of Japan and the IDEA database, which is developed by AIST.
Data format: IDEA format
Database based on statistical IO data: Available
Central control: Japan Environmental Management Association for Industry (JEMAI)
Funding needed for work on databases: up to 100,000$
Country: Malaysia [3 respondents]

Status of mainstreaming
Leading organization for LCA promotion: Government
LC research: There exist only few LCA studies from Malaysia.
Market for LC services: Developing
LCA software penetration: International LCA software is used.
Research on LCA and related topics: Limited use of Impact Category Indicators, for instance just focusing on Global Warming Potential for Carbon Footprinting.
LCA studies are led by: Academics
LCA based policies and drivers: No policies in place based on LC approaches in Malaysia. The main drivers for the uptake of LC approaches are: critical hotspots identification in the supply chain by retailers and big companies, marketing and reputational activities, sustainability reporting, public procurement regulations and carbon footprint labelling.
Funding required to bring the LCA work to the next level: up to US$1,000,000

Network characterization
Network availability: A Life cycle network which is called LCA Malaysia was founded in 2008. It is connected with the National LCA project which aims at establishing a national LCA related database.
Network activity: The network is engaged with some activities such as organizing workshops and seminars.
Communication platform: It has an official web page (http:\\lcamalaysia.sirim.my/)

Database
Database availability: There is a national LCA database in Malaysia.
Central control: SIRIM is the operator.
Data format: ILCD
Database based on statistical IO data: Not available
Funding needed for work on databases: Up to 100,000$ funding is needed for work on databases.
Country: Philippines [1 respondent]

Status of mainstreaming
Leading organization for LCA promotion: Academia
LCA research: Some, mainly by academics
Market for LC services: Developing
LCA software penetration: International software
Research on LCA and related topics: Limited use of Impact Category Indicators
LCA based policies and drivers: No use of LCA in the legislation. Sustainability reporting, demands from the financial sector, legal requirements, multilateral and bilateral initiatives are the main drivers for the uptake of life cycle approaches in your country.
Funding required to bring the LCA work to the next level: up to US$1,000,000

Network characterization
Network availability: Not available

Database
Database availability: Not available
Funding needed for work on databases: up to 100,000$
Country: South Korea [10 respondents]

**Status of mainstreaming**

Leading organization for LCA promotion: academia, consultant, industry and government
LCA research: Many, mainly by academics and big companies
Market for LC services: fully developed
LCA software penetration: International software and local software
Research on LCA and related topics: Limited use of Impact Category Indicators
LCA based policies and drivers: LCA has been used in the legislation. Type III labeling/Environmental Product Declarations, Sustainability Reporting, Critical hotspots identification in the supply chain by retailers and big companies, Public procurement regulations, Marketing and reputational activities, Legal requirements, Demands from the financial sector are the main drivers for the uptake of LC approaches.
Funding required to bring the LCA work to the next level: no funding need

**Network characterization**

Network availability: No clear information on the availability of national network in the survey.

**Database**

Database availability: Available (Korean National Database [http://www.edp.or.kr/lci/lci_db.asp])
Database based on statistical IO data: Not available
Central control: Korea Environmental Industry and Technology Institute (KEITI)
Country: Thailand [6 respondents]

Status of mainstreaming

Leading organization for LCA promotion: Academia and government

LC research: many good quality training courses and seminars by several universities and research organization

Market for LC services: Developing

LCA software penetration: International LCA software

Research on LCA and related topics: Local LCIA development has started

LCS studied led by: Academics and big companies

LCA based policies and drivers: No clear information on the application on the use of LCA for policy. Type III labeling/ Environmental Product Declarations, Critical hotspots identification in the supply chain by retailers and big companies, Public procurement regulations, Innovation efforts by companies of any size, Marketing and reputational activities are main drivers for the uptake of LC approaches.

Funding required to bring the LCA work to the next level: An overall funding up to US$1,000,000 is needed.

Network characterization

Network availability: LCA network exists in Thailand. Thai LCA network was established in 2007. It has about 50-100 individual members from EPAs, environmental NGOs, standardization organisations, academic institutions, Consultancies and Large companies.

Network activity: It has some activities. It is engaged in different activities such as: organizing international conferences, providing LCA/Carbon Footprint /Water Footprint trainings, carbon footprint forum, Green GDP and Green public procurement.

Communication platform: It has an official web page (www.thailca.net).

Database

Database availability: There is a database that is developed by academic or research organization.

Central control: There is central control.

Data format: ILCD

Database based on statistical IO data: Under development

Funding needed for work on databases: Up to 100,000$ funding is needed for work on databases.
3.4. Latin America and the Caribbean

Country: Argentina [5 respondents]

Status of mainstreaming
Leading organizations for LCA promotion: Academia.
LCA training: Still few training activities and mainly on LCA and environmental footprinting.
Market for LC services: Limited
LCA software penetration: International commercial software and the open LCA one are used.
Research on LCA and related topics: Development of local characterization factors for LCIA has started, e.g., on land use characterization factors.
LCA studied led by: academia
LCA based policies and drivers: No policies in place based on LC approaches; main drivers are the requirements by type III labeling, environmental product declarations, product environmental footprinting, innovation efforts and critical hotspots identification in the supply chain by retailers and big companies
Funding required to bring the LCA work to the next level: Up to US$ 100,000 is required.

Network characterization
Network availability: There is a life cycle network since 2009 with about 10-50 members from industries, NGOs, Government and academia. The network is led by the academia. They are not yet legal entity
Network activity: There has been some relevant activity since 2013 especially around the organization of CILCA 2013. Their outreach is limited.
Commination platform: There is no dedicated website yet.

Database
Databases availability: There is no a national database but its development is in the planning phase and will be led by the LC network. To ensure best practice for LCA dataset development and interoperability of LCA databases at the international level in your country, respondents suggest to use the Global Guidance Principles on LCA databases and provide the datasets in more than one LCA format.
Central control: Not applicable
Data format: Not decided yet.
Database based on statistical IO data: Not available
Funding needed for work on databases: Funding of about US$ 50,000 is needed to develop a national database.
Country: Brazil [19 respondents]

Status of mainstreaming

Leading organization for LCA promotion: Academia and big companies

LC training: There is a good offer of good quality training activities on LCA related topics

Market for LC services: Still limited but growing especially in big organizations.

LCA software penetration: International commercial softwares are used.

Research on LCA and related topics: Database and LCA data has been recurrently addressed in latest research activities.

Sectors addressed in LCA studies led by: Many LCA studies are available and have been led by the academia and big companies.

LCA based policies and drivers: Policies related to the building and construction and natural resources management are in place based on LC approaches; main drivers are the requirements on innovation efforts and ‘sustainability reporting’ to remain competitive for marketing purposes based on environmental footprinting information and critical hotspots identification in the supply chain by retailers and big companies.

Funding required to bring the LCA work to the next level: US$ 1,000,000 mainly in connection with database development.

Network characterization

Network availability: There is a life cycle network since 2004 with about 50-100 members from industries, NGOs, Government and academia with relevant activity since 2007. The network is led by a consortia of academia and industry representatives as well as by individuals. It has a legal entity.

Network activity: Training on LCA, workshops, key studies on LCA and the development of a national database. They cover all areas of LCA (LCSA, S-LCA, LCC, E-LCA, LCM,

Communication platform: There is a dedicated website: http://www.abcvbrasil.org.br/#

Database

Database availability: There is a national database which is operated by the Brazilian Institute of Information for Science and Technology (IBICT) and developed under the Brazilian program of LCA (http://acv.ibict.br/) with governmental and academia support.

Central control: IIBICT is responsible for this database and will coordinate it.

Data format: ILCD and EcoSpold have been chosen as the data format.

Database based on statistical IO data: two respondents added that there is an I/O database for the country.

Funding needed for work on databases: US$ 1,000,000.
Country: Chile [4 respondents]

**Status of mainstreaming**

Leading organization for LCA promotion: LCA is led by the academia, consultants and leading industrial organizations.

LC training: Multiple

Market for LC services: Limited

LCA software penetration: International commercial softwares and the open LCA one are used.

Research on LCA and related topics: Database and LCA data has been recurrently addressed in latest research activities.

Sectors addressed in LCA studies led by: Several LCA studies are available and have been led by the academia and consultants

LCA based policies and drivers: No policies in place based on LC approaches; main drivers are the requirements by type III labeling, environmental product declarations, product environmental footprinting, marketing purposes and critical hotspots identification in the supply chain by retailers and big companies

Funding required to bring the LCA work to the next level: From US$ 50,000 to US$ 1,000,000

**Network characterization**

Network availability: There is a life cycle network since 2009 with about 10-50 members from industries, NGOs, Government and academia. There is a dedicated website: http://redacv.cl/. The network is led by the academia and consultants. It has a legal entity.

Network activity: it is active since 2009 especially with the organization of CILCA 2009. It develops training, LCA and seminars.

Communication platform: There is a dedicated website: http://redacv.cl/

**Database**

Database availability: A national database, Ecobase (www.ecobase.cl), led by Fundacion Chile has been launched in July 2015. To ensure best practice for LCA dataset development and interoperability of LCA databases at the international level in your country, respondents suggest to use the Global Guidance Principles on LCA databases, provide the datasets in more than one LCA format and follow the procedures of an existing LCA database.

Data format: Ecobase is using the ILCD, ecospold v1 and CSV simapro formats

Central control: Fundacion Chile is coordinating the Ecobase database.

Database based on statistical IO data: One respondent added that there is an I/O database for the country.

Funding needed for work on databases: From US$ 25,000 to US$ 1,000,000.
Country: Mexico [7 respondents]

Status of mainstreaming
Leading organization for LCA promotion: Consultants and academia
LC training: Several and mainly on LCA and environmental footprinting
Market for LC services: Limited
LCA software penetration: International commercial softwares and the ‘open LCA’ are used.
Research on LCA and related topics: LCA databases.
LCA studies led by: Several LCA studies are available and have been led by the academia and big companies
LCA based policies and drivers: Regulations on natural resources, including water and energy, Building and construction related regulation are incorporating LC thinking based principles; main drivers are the internal policy on product environmental footprinting, for innovation and marketing purposes and to support the critical hotspots identification in the supply chain by retailers and big companies.
Funding required to bring the LCA work to the next level: Main funding sources in Mexico have been the private sector (e.g. PEMEX). Funding of up to US$ 1,00,000 is needed.

Network characterization
Network availability: There is a life cycle network since 2011 with about 10-50 members from industries, NGOs, Government and academia and limited outreach. The network is led by consultancy groups.
Network activity: It mainly organizes training and workshops and is not so active.
Communication platform: There is a dedicated website:
http://sitios.iingen.unam.mx/CicloDeVida/Default.html

Database
Database availability: There is a Mexican database called Mexicanihu (http://www.centroacv.mx/servicios.html). To ensure best practice for LCA dataset development and interoperability of LCA databases at the international level in the country, respondents suggest to use the Global Guidance Principles on LCA databases.
Central control: CADIS has developed the database and is coordinating it. It is a consultancy organization (http://www.centroacv.mx/)
Data format: New format compatible with EcoSpold 2 and ILCD 1.1
Database based on statistical IO data: One respondent added that there is an I/O database for the country.
Funding needed for work on databases: Funding of up to US$ 100,000 is needed to strengthen a national database.
Country: Peru [8 respondents]

**Status of mainstreaming**

Leading organization for LCA promotion: Academia  

LC training: Still few and mainly on LCA and environmental footprinting  

Market for LC services: Limited  

LCA software penetration: International commercial softwares are used.  

Research on LCA and related topics: LCA of critical sectors in Peru: biofuels, cement, energy, among others.  

Sectors addressed in LCA studies led by: Several LCA studies are available and have been led by the academia  

LCA based policies and drivers: Regulations on natural resources (including water and energy, Building and construction) are incorporating LC thinking based principles; main drivers are the internal policy on sustainability reporting and product environmental footprinting as well as legal requirements (e.g. through sustainable public procurement).  

Funding required to bring the LCA work to the next level: Funding of up to US$ 1,000,000 is needed mainly in connection with the development of a national database.

**Network characterization**

Network availability: There is a life cycle network since 2005 with about 10-50 individual members from the academia, NGOs, consulting firms and Government with some relevant activity since 2007 and good outreach. The network is led by the academia. It has no legal entity.  

Network activity: training, dissemination and research.  

Communication platform: There is a dedicated website: [http://red.pucp.edu.pe/ciclodevida/](http://red.pucp.edu.pe/ciclodevida/)  

**Database**

Database availability: There is no national database. To ensure best practice for LCA dataset development and interoperability of LCA databases at the international level in the country, respondents suggest to use the Global Guidance Principles on LCA databases and provide the datasets in more than one LCA format.  

Data format: Not applicable  

Central control: Not applicable  

Database based on statistical IO data: not available  

Funding needed for work on databases: Funding of up to US$ 1,000,000 is needed
3.5. Africa

Country: Egypt [1 respondent]

Status of mainstreaming
Leading organizations for LCA promotion: Academia and standardization body.
LCA training: Still few training activities on LCA.
Market for LC services: None
LCA software penetration: Use of international commercial software has started.
Research on LCA and related topics: Very limited.
LCA studied led by: academia and big organizations
LCA based policies and drivers: No policies in place based on LC approaches; there is almost no real driver.
Funding required to bring the LCA work to the next level: Between US$ 100,000 and US$ 1,000,000 is required.

Network characterization
Network availability: There is no a life cycle network but few experts from the academia and the National Cleaner Production Center. It does not have a legal entity.
Network activity: Not applicable.
Communication platform: Not existent.

Database
Databases availability: There is no a national database. To ensure best practice for LCA dataset development and interoperability of LCA databases at the international level in your country, respondents suggest to use the Global Guidance Principles on LCA databases and follow the procedures of an existing LCA database.
Central control: Not applicable
Data format: Not applicable
Database based on statistical IO data: Not available
Funding needed for work on databases: Funding of about US$ 50,000 is needed to develop a national database.
Country: Morocco [2 respondents]

Status of mainstreaming

Leading organization for LCA promotion: Consultant, Industry, Government

LC research: Multiples training courses and seminars by several universities and research organization are available in Morocco.

Market for LC services: Developing

LCA software penetration: International LCA software

Research on LCA and related topics: Limited use of Impact Category Indicators

LCA based policies and drivers: LCA is not yet used for policy. Critical hotspots identification in the supply chain by retailers and big companies, marketing and reputational activities, sustainability reporting, type III labeling/ environmental product declarations, public procurement regulations, innovation efforts by companies of any size and legal requirements are the main drivers for the uptake of life cycle approaches.

Funding required to bring the LCA work to the next level: An overall funding up to 100,000$ is needed.

Network characterization

Network availability: Not available

Database

Database availability: Not available
Country: South Africa [7 respondents]

Status of mainstreaming
Leading organization for LCA promotion: Academia and consultants
LC training: Still few and mainly on LCA, LC inventory and environmental footprinting
Market for LC services: Limited.
LCA software penetration: International commercial softwares and open LCA are used.
Research on LCA and related topics: Database and LCAs on natural related resources such as biofuels, water, among others.
Sectors addressed in LCA studies led by: Few LCA studies are available and have been led by the academia.
LCA based policies and drivers: Policies related to natural resources management are in place based on LC approaches; main drivers are the need for solid results for critical hotspots identification in the supply chain by retailers and big companies and marketing and reputational activities based on environmental footprinting information
Funding required to bring the LCA work to the next level: Funding of up to US$ 1,000,000 is needed.

Network characterization
Network availability: There is a life cycle network since 2004-2005 with no legal entity.
Network activity: It has about 50-100 members from industries, NGOs, Government and academia with relevant activity since 2007. The network is led by a consultants and the academia. Key working areas are sharing of information and occasional workshops
Communication platform: The available website has not been updated since 2011: [http://www.estis.net/sites/alcanet/](http://www.estis.net/sites/alcanet/)

Database
Database availability: There is no a national database but its development is in the planning phase. To ensure best practice for LCA dataset development and interoperability of LCA databases at the international level in your country, respondents suggest to use the Global Guidance Principles on LCA databases.
Central control: It will be led by the academia or research organization.
Data format: Ecospold had been chosen as the data format.
Database based on statistical IO data: One respondent added that there is an I/O database for the country.
Funding needed for work on databases: Funding between US$ 100,000 and US$ 1,000,000 is needed.
4. Annex 4: LCA database providers

4.1. Agence de l'Environnement et de la Maîtrise de l'Energie (ADEME)

Overview

- Operator: National
- Database name: Agri-BALYSE
- Web-site: http://www.jt-agribalyse.ademe.fr/
  http://www2.ademe.fr/servlet/list?catid=25514
- Provider: Agence de l'Environnement et de la Maîtrise de l'Energie, France
- Contact: agribalyse@ademe.fr
- Released/ last updated:
- Dataset number: 822
- Licensing:
- Data language(s):

Access – Download formats and accessibility

- File type:
- Download format:
- Compatible software: SimaPro, openLCA

Content – data collection, objects, background

- Process type:
- Database scope: agriculture
- **Data source**: input from institutes for applied agricultural research
- **Target group**: actors of food chain, farming industry, research, extension services
- Data generator:
- LCI modeling method:
- Time relevance:
- Geographical coverage:
- Based on ISO 14040/14044: yes

Quality

-Reviewed level:
- Is there a data quality score?:
- **Additional**: project 2009-2013: to develop a basis for consistent and transparent data for agricultural products

Source of information
4.2. Australian Lifecycle Assessment Society

Overview

- Operator: National
- Database name: Australian Life Cycle Inventory Database (AusLCI)
- Provider: Australian Lifecycle Assessment Society
- Contact: Tim Grant, Auslc@alcas.asn.au
- Released/last updated:
- First versions:
- Dataset number: over 150
- Licensing: free (requires registration and licence agreement)
- Data language(s): English

Access – Download formats and accessibility

- File type: XML file viewer (just unit process)
- Download format: *.xls (both unit and system process)
- Compatible software:

Content – data collection, objects, background

- Process type: both system and unit processes
- Database scope: Agriculture, electricity, fuels, materials, bio based materials, transport
- Data source: Collection of companies and bodies
- Target group:
- LCI modeling method: attributional
- Time relevance:
- Geographical coverage: Australia, a few international transport processes
- Data types: statistical, process-specific
- Based on ISO 14040/14044: no, based on ISO 14048 **

Quality

- Reviewed level: Internal Review (Technical review (internal), Critical Review with AusLCI guidelines)
- Is there a data quality score?: no
- Additional: Missing background processes are filled using a modified ecoinvent data set developed by Start-2-See.

Source of information

- [AusLCI committee 2013; AusLCI website 2011]
4.3. BioEnergieDat Project

Overview
- Operator: Public
- **Database name**: BioEnergieDat
- **Web-site**: [http://www.bioenergiedat.de/daten](http://www.bioenergiedat.de/daten)
- **Provider**: BioEnergieDat project funded by Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety
- **Contact**: Frau Prof. Liselotte Schebek (project leader), info@bioenergiedat.de
- **Released/ last updated**: 2013 February (project completed)
- **Dataset number**: 178
- **Licensing**: free
- **Data language(s)**: German

Access – Download formats and accessibility
- **File type**: HTML (web access)
- **Download format**: ILCD
- **Compatible software**: all software which can read the ILCD-Format

Content – data collection, objects, background
- **Process type**: unit process, system (or aggregated) process
- **Database scope**: wood, wastewood, wheat, biowaste
- **Data source**: research and projects of project members
- **Target group**: actors of food chain, farming industry, research, extension services
- **LCI modeling method**: other
- **Data creator**: members of the German BioEnergieDat-project
- **Time relevance**: 2009 - 2011
- **Geographical coverage**: Germany
- **Data types**: process-specific
- **Based on ISO 14040/14044**: yes

Quality
- **Reviewed by**: Internal + External (project members and two panels of experts)
- Is there a data quality score?: yes
- **Additional**: Data sets are fully parameterized with the idea to support flexible modeling as far as possible.

Source of information
- [Schebek et al. 2013]
4.4. Brazilian Institute of Information for Science and Technology (IBICT)

Overview

- **Operator:** Ibict
- **Database name:** Banco Nacional de Inventários do Ciclo de Vida (SICV)
- **Web-site:** acv.ibict.br
- **Provider:** Programa Brasileiro de Avaliação do Ciclo de Vida / Brazilian LCA Programme
- **Contact:** Tiago Braga, tiagobraga@ibict.br
- **Released:** 2010 (beta) will be released again in 2016/03/16
- **Dataset number:** 10
- **Licensing:** Free (with registration)
- **Data language(s):** English, Portuguese

Access – Download formats and accessibility

- **File type:** HTML (web access)
- **Download format:** ILCD / XML
- **Compatible software:** openLCA

Content – data collection, objects, background

- **Process type:** Aggregated and Unit Process
- **Database scope:** General Type
- **Data source:** Industry, Academia, Agrobusiness
- **Target group:** medium-sized and big-sized manufacturers, agribusiness, academia, government and other users to support their voluntary efforts in improving the environmental performance of their products as well scientific researches
- **Data generator:**
- **LCI modeling method:**
- **Time relevance:** not defined yet
- **Geographical coverage:** Brazil
- **Data types:**
- **Based on ISO 14040/14044:** yes

Quality

- **Reviewed level:** Peer review (Unep model)
- **Is there a data quality score?** Yes. It will be released 2016/03/16

Source of information

- Information provided by database provider
4.5. Centre for Life Cycle Assessment and Sustainable Design (CADIS)

Overview

• **Operator:** National
• **Database name:** Mexicaniuh
• **Web-site:** http://webcadis.webhop.me:8088/MexicaniuhEE/
• **Provider:** Centre for Life Cycle Assessment and Sustainable Design (CADIS)
• **Contact:** Reynaldo Felix, rfelix@centroacv.mx
• **Released:**
• **Dataset number:** 81
• **Licensing:** Under agreement
• **Data language(s):** English, Spanish

Access – Download formats and accessibility

• **File type:** System interface through Web access (JAVA)
• **Download format:** Individual dataset in file(s) *.xml
• **Compatible software:** Compatible with file formats Ecospold and ILCD

Content – data collection, objects, background

• **Process type:** Unit processes and aggregated datasets
• **Database scope:** Cement, construction materials, Electricity, Petroleum and petrochemical, Chemical, Water, Transport, Wood, Biofuels, Metals, Textile and leather, Waste treatment
• **Data source:** Industry Associations and gaps with Industry statistics
• **Target group:** manufacturers, LCA practitioners and other users interested in knowing and improving the environmental performance of their products
• **Data generator:** Construction, Chemical and Energy sectors
• **LCI modelling method:**
• **Time relevance:** 1998 - 2012
• **Geographical coverage:** Mexico (projected to become a Latin America regional database platform)
• **Data types:** Industry life cycle inventories
• **Based on ISO 14040/14044:** yes

Quality

• **Reviewed level:** In process
• **Is there a data quality score?:**

Source of information

[CADIS website]
4.6. CIRAIG/ ecoinvent Center

- Overview
- Operator: Provincial
- Database name: Quebec LCI database
- Provider: CIRAIG/ecoinvent Center
- Contact: [support_Quebec_LCI_DB@ciraig.org](mailto:support_Quebec_LCI_DB@ciraig.org)
- Released/last updated: 09/2014
- First version: 09/2014
- Licensing: via ecoinvent license for full access. Individual gate to gate unit processes (and some cradle to gate processes) available directly from CIRAIG for no fee.
- Data language(s): English
- Dataset number: 900

Access – Download formats and accessibility

- **File Type:** HTML (web access)
- **Download format:** ecoSpold 2
- **Compatible Software:** Basically all software able to read the ecoSpold2-format or where the database has been converted into; at present ecoinvent3 is at least available in
  - SimaPro ([http://www.pre-sustainability.com/simapro](http://www.pre-sustainability.com/simapro)),
  - openLCA ([www.openlca.org](http://www.openlca.org)),
  - Umberto ([www.umberto.de](http://www.umberto.de))
  - GaBi ([www.gabi-software.com](http://www.gabi-software.com)) provides a previous version of the ecoinvent database, ecoinvent 2.2

Content – data collection, objects, background

- **Process type:** unit process, system (or aggregated) process
- **Database scope:** agrifood, chemicals, energy/electricity, EOL, mines and metals, metal forming, Non-metallic mineral materials, pulp and paper, transport, water treatment, wood and wood products
- **Data source:** industrial data, some calculated/extrapolated values
- **Data set generator:** CIRAIG
- **LCI modeling method:** attributional, consequential
- **Time relevance:** late 2000
- **Geographical coverage:** Mostly Quebec, some North America, some Global
- **Based on ISO 14040/14044:** Yes

Quality

- **Reviewed level:** Internal + External
• Is there a data quality score?: Yes
• Additional: detailed uncertainty \ data quality descriptions \ background data \ funded project by the Quebec government

Source of information
• Information provided by database provider

4.7. CPM – the Swedish Life Cycle Center

Overview
• Operator: private-public institution
• Database name: SPINE@CPM
• Web-site: http://cpmdbase.cpm.chalmers.se/
• Provider: CPM – the Swedish Life Cycle Center
• Contact: cpm@chalmers.se or Johan Tivander johan.tivander@chalmers.se
• Released/ last updated: 1998 and since then constantly extended
• Dataset number: over 740
• Licensing: Free
• Data language(s): English

Access – Download formats and accessibility
• File type: HTML (web access)
• Download format: ILCD
• Compatible software: all software which can read the ILCD-Format

Content – data collection, objects, background
• Process type: unit processes, system (or aggregated) processes
• Database scope: Electricity carrier and production, transport, manufacturing, agriculture, chemicals, paper products, consumer goods, construction, waste management, etc.
• Data source:
• LCI modeling method:
• Time relevance: 1990 - 2013
• Geographical coverage: Sweden, other European countries
• Based on ISO 14040/14044: yes

Quality
• Reviewed level:
• Is there a data quality score?: yes

Source of information
• [CPM web-site]
4.8. Environmental Technology Research Centre (Malaysia)

Overview

DB_1. Operator: National/ Governmental
DB_2. Database name: MY-LCID
- Web-site: http://mylcid.sirim.my/sirimlca/index.xhtml
- Provider: Environmental Technology Research Centre
- Contact: SIRIM Berhad
  Environmental Technology Research Centre
  1, Persiaran Dato’ Menteri
  Section 2 P. O. Box 7035, 40700 Shah Alam
  Malaysia
- Tel: +603 5544 6564, +603 5544 6569, +603 5544 6588
- Fax: +603 5544 6590
- Email: mylcid@sirim.my
- Released: Ninth Malaysia Plan (9MP; 2005 -2010)
- Licensing: restricted
- Data language(s): English
- Dataset number: 160

Access – Download formats and accessibility

- File type: HTML (web access); free access to the metadata
- Download format: ILCD
- Compatible software: all software which can read the ILCD-Format

Content – data collection, objects, background

- Process type: unit process, system (or aggregated) process
- Database scope: Energy carriers and technologies, materials production, systems, transport services
- Data source: Regionalized datasets are established using Malaysian specific energy supply chains and Malaysian specific preliminary products. Modeled datasets e.g. electricity supply was modeled from data reported in the Annual Report of National Energy Balance where fuel mix and generation capacity are publicly informed.
- Target group: Malaysian LCA practitioner
- LCI modelling method: attributional
- Geographical coverage: MY, GLO, DE
- Based on ISO 14040/14044: yes

Quality

- Reviewed level: Internal
• **Additional**: The Malaysia Life Cycle Inventory Database (MYLCID) is an output of the Ninth Malaysia Plan (9MP; 2005-2010) of the Government of Malaysia. This database of Life Cycle Inventory (LCI) datasets supports ecolabelling programmes, life cycle assessment studies, eco-design, environmental declaration communication and other environmental management initiatives that require life cycle inventory information.

**Source of information**

- Berhard 2009
- additional information provided by database provider

4.9. **Ministry of Environment, Ministry of Agriculture, Ministry of Housing and Urban Development, Chile**

**Overview**

- **Operator**: National
- **Database name**: Ecobase
- **Web-site**: http://www.ecobase.cl
- **Provider**: Ministry of Environment, Ministry of Agriculture, Ministry of Housing and Urban Development, Chile
- **Contact**: Cristián Emhart, cristian@regenerativa.cl; Cristóbal Loyola, cristobal@regenerativa.cl
- **Released**: November 2015
- **Dataset number**: 147
- **Licensing**: Free (with registration)
- **Data language(s)**: Spanish

**Access – Download formats and accessibility**

- **File type**: Excel with macros (web access)
- **Download format**: *.xlsm
- **Compatible software**: On excel tool as matrix. Not yet available for LCA software

**Content – data collection, objects, background**

- **Process type**:
- **Database scope**: Construction products. Food products: fresh fruits, processed food, meat, seafood, and wine.
- **Data source**: Industry statistics, primary data from companies, and adapted LCA literature.
- **Target group**: Food exporters’ users to support their voluntary efforts in improving the environmental performance of their products. National construction product producers in order to create baseline models.
- **Data generator**: Construction & food product companies.
Opportunities for national life cycle network creation and expansion around the world

- **Time relevance**: 2013-2015
- **Geographical coverage**: Chile
- **Data types**: Industry statistics, primary data from companies, and adapted LCA literature.
- **Based on ISO 14040/14044**: yes

**Quality**

- **Reviewed level**: Construction products reviewed by third party. Food products reviewed internally.
- **Is there a data quality score?**: Based on pedigree matrix. Not yet calculated.

**Source of information**

- Information provided by database provider

4.10. **Swiss Federal Office for the Environment, FOEN**

**Overview**

- **DB_3. Operator**: Private-public partnership
- **DB_4. Database**: ecoinvent data v2.2+ plus extensions (collection of free LCI data of different projects)
- **Web-site**: [http://www.lc-inventories.ch/](http://www.lc-inventories.ch/)
- **Provider**: FOEN, mandated to ESU-services Ltd.
- **Contact**: Dr. Niels Jungbluth, jungbluth(at)esu-services.ch
- **Released/last updated**: 
- **Licensing**: free (requires registration)
- **Data language(s)**: English

**Access – Download formats and accessibility**

- **File type**: ecoSpold-packages or other packages for direct software import
- **Download format**: ecoSpold1
- **Compatible software**: some datasets available as SimaPro, GaBi or openLCA package

**Content – data collection, objects, background**

- Process types:
- **Database scope**: full scope of ecoinvent data v2.2, with updates on electricity (hydro power, photovoltaic, nuclear, national electricity mixes, including new transmission and distribution data), gas and oil production, biomass, flooring materials, insulation
- **Data source**: different authors from different projects
- **Target group**: LCA practitioners
- **Time relevance**: reference period: 2008-2014
• Geographical coverage: global with focus on Europe and Switzerland
• Based on ISO 14040/14044: yes

**Quality**
• Reviewed level:
• Is there a data quality score?:
• **Additional:** The data are elaborated according to the ecoinvent v2.2 guidelines and they are provided in ecoSpold1 format.

**Source of information**
• [openLCA Nexus 2014a, 2014b, 2014c]

4.11. European Commission's Joint Research Centre, Institute for Environment and Sustainability (JRC-IES)

**Overview**

DB_5. **Operator:** Governmental Body
DB_6. **Database name:** ELCD 3.0 (European Life Cycle Database)

• Provider: JRC-IES
• **Contact:** eplca@jrc.ec.europa.eu
• Released/last updated: 2013-Sept
• First version: 2006
• Licensing: free
• Data language(s): English
• Dataset number: 334

**Access – Download formats and accessibility**
• **File type:** HTML (web access)
• Download format: ILCD 1.1
• **Compatible software:** all software that is able to read the ILCD-Format or where the database has been converted into; at present the ELCD database is at least available in
  a. GaBi ([www.gabi-software.com](http://www.gabi-software.com))
  b. openLCA ([www.openlca.org](http://www.openlca.org)),
  c. Umberto ([www.umberto.de](http://www.umberto.de))
  d. SimaPro ([http://www.pre-sustainability.com/simapro](http://www.pre-sustainability.com/simapro)) (albeit not in the most recent version of ELCD)

**Content – data collection, objects, background**
• **Process type:** unit process, system (or aggregated) process
• **Database scope:** key materials, energy carriers, transport and waste management
Opportunities for national life cycle network creation and expansion around the world

- **Data source**: EU-level business associations and other sources for key materials, energy carriers, transport and waste management
- **Data set owner**: CEWEP - Confederation of European Waste-to-Energy Plants e.V., PE International, GlassFibre Europe, etc.
- **Target group**: LCA practitioners, policy
- **LCI modeling method**: attributional
- **Time relevance**: Reference year: 1996-2011; valid: 2006-2020
- **Geographical coverage**: some individual countries, Europe, Global
- **Based on ISO 14040/14044**: yes

**Quality**

- **Reviewed level**: Internal+ External (ILCD Data Network entry-level data quality requirements: high quality data, basic quality data, data estimate (the review of all datasets is still ongoing))
- **Is there a data quality score?:** yes

**Source of information**

- [JRC-IES 2012; JRC 2014; openLCA Nexus 2014d, ELCD 2014]

4.12. German Federal Ministry of Transport, Building and Urban Development

**Overview**

- **DB_7. Operator**: Governmental Body
- **Database name**: Ökobau.dat 2013
- **Web-site**: [http://www.nachhaltigesbauen.de/oekobaudat/](http://www.nachhaltigesbauen.de/oekobaudat/)
- **Provider**: German Federal Ministry of Transport, Building and Urban Development
- **Contact**: nachhaltiges-bauen@bbr.bund.de
- **Released/ last updated**: 2013
- **First version**: 2009
- **Process number**: 954
- **Licensing**: free
- **Data language(s)**: German

**Access – Download formats and accessibility**

- **File type**: HTML (web access)
- **Download format**: ILCD-variante
- **Compatible software**: GaBi, openLCA

**Content – data collection, objects, background**

- **Process types:**
• **Database scope:** construction materials (mineral building material, insulation materials, wood products, metals, coatings and sealants, construction of plastics, components of windows, doors and curtain walling, etc.)

• **Data types/sources:** generic or company or association specific EPD data

• **Target group:** LCA practitioners

• **Data set owner:** PE International

• **LCI modeling method:**
  - Time relevance: 2012
  - Geographical coverage: Germany, EU-25
  - Based on ISO 14040/14044: yes

**Quality**

• Reviewed by: Internal
• Is there a data quality score?:

**Source of information**

• [BBSR 2014; openLCA Nexus, Ökobaudat 2014]

4.13. National Institute of Advanced Industrial Science and Technology (AIST)/ Japan Environmental Management Association for Industry (JEMAI)

**Overview**

• **Operator:** National

• **Database name:** Inventory Database for Environmental Analysis (IDEA)

• **Web-site:** [http://www.pu-hiroshima.ac.jp/~kensuke/lca_idea.html](http://www.pu-hiroshima.ac.jp/~kensuke/lca_idea.html) (in Japanese)

• **Provider:** National Institute of Advanced Industrial Science and Technology (AIST)/ Japan Environmental Management Association for Industry (JEMAI)

• **Contact:** [Jemai-lca@jemai.or.jp](mailto:Jemai-lca@jemai.or.jp)

• **Released/last updated:** 2010 (currently under revision)

• **Dataset number:** more than 3000

• **Licensing:** for purchase

• **Data language(s):** English, Japanese

**Access – Download formats and accessibility**

• **File type:**
• **Download format:**
• **Compatible software:** MiLCA

**Content – data collection, objects, background**

• **Process type:** unit process

• **Database scope:** whole industry
• **Data source:** Made from Japanese and global statistics, modeling of production process and industry associations
• Target group: LCA practitioner
• LCI modeling method: attributional
• Time relevance:
• Geographical coverage: Japan, Global
• Data types:
  • Based on ISO 14040/14044: yes

**Quality**

• Reviewed level: internal review
• Is there a data quality score?: yes (own method)

**Source of information**

• [GHG protocol 2012]


**Overview**

• Operator: National
• Database name: U.S. Life Cycle Inventory Database
• **Web-site:** https://www.lcacommons.gov/nrel/search
• Provider: NREL
• **Contact:** https://www.lcacommons.gov/nrel/contact or lcahelp@rt.nal.usda.gov
• **Released (first version):** 2003, since then constantly extended and updated
• Licensing: free (requires registration)
• Data language(s): English
• Dataset number: 880

**Access – Download formats and accessibility**

• **File type:** HTML (web access)
• **Download format:** ecoSpold-XML, ecoSpold-Excel
• **Compatible software:** all software which can read the ecoSpold-Format

**Content – data collection, objects, background**

• **Process type:** unit processes
• **Database scope:** Transportation, agricultural, oil and gas extraction, chemical/ paper/ primary metal/ plastics product manufacturing, forestry and logging, waste management, etc.
• **Data source:** Academic research
• **Data generator:** different authors
• **Target group:** Primary User: LCA Experts, Tools Developers, Manufacturers, Secondary Users: Architects, Builders, Government Agencies, Environmental Preferable Purchasing Programs

• LCI modeling method:
• Time relevance: 1990 - 2020
• Geographical coverage: US, Global
• Based on ISO 14040/14044: yes

**Quality**

• Reviewed level:
• Is there a data quality score?:
• **Additional:** The U.S. LCI Database (www.nrel.gov/lci) was initiated in 2003 to fulfill the need for publicly available LCI data.

**Source of information**

- [NREL 2005, 2009]

4.15. **National Science and Technology Development Agency (NSTDA)**

**Overview**

• Operator: National
• **Database name:** Thai National Life Cycle Inventory
• **Web-site:** [http://thailcidatabase.net/appadmin/db_lci.php](http://thailcidatabase.net/appadmin/db_lci.php)
• **Provider:** MTEC, National Science and Technology Development Agency (NSTDA)
• **Contact:** Dr. Rungnapa Tongpool, rungnapt@mtec.or.th
• Released/ last updated: 2006/2014
• **Dataset number:** GtG - over 800, CtG - 500
• Licensing: No
• Data language(s): English, Thai

**Access – Download formats and accessibility**

• File type: Excel & PDF
• **Download format:** ILCD & Ecospold (Excel)
• Compatible software: SimaPro

**Content – data collection, objects, background**

• **Process type:** unit process, system (or aggregated) processes
• **Database scope:** Infrastructure, energy, utilities and transportation, agriculture, industrial materials, commodity chemicals, building and construction material, basic chemicals, waste management
• **Data source:** Primary (electricity & energy, industry, agriculture) Secondary (agriculture and agricultural machinery usage)
- **Target group:** Government, Industry & University
- Data generator: MTEC
- LCI modeling method: Attribution
- Time relevance: 2005-2014
- Geographical coverage: National & Regional
- Based on ISO 14040/14044: yes

**Quality**
- **Reviewed level:** Internal + External (Panel of interested parties)
- Is there a data quality score?:

**Source of information**
- [Mungcharoen 2014]
- additional information provided from database provider

4.16. **New Energy Externalities Developments for Sustainability (NEEDS) Project**

**Overview**

DB_9. Operator: Public

DB_10. Database name: NEEDS
- **Web-site:** [http://www.needs-project.org/needswebdb/search.php](http://www.needs-project.org/needswebdb/search.php)
- **Provider:** New Energy Externalities Developments for Sustainability (NEEDS) Project
- **Contact:** [http://www.needs-project.org/needswebdb/contacts.php](http://www.needs-project.org/needswebdb/contacts.php)
- Released/last updated: 2009
- First version: 2009
- Licensing: free
- Data language(s): English
- Dataset number: 187

**Access – Download formats and accessibility**
- **File type:** HTML (web access)
- Download format: ecoSpold1 (xml), *.xls
- **Compatible software:** all software which can read the ecoSpold1-format

**Content – data collection, objects, background**
- **Process type:** System (or aggregated) process (“cradle to grave”) + costs for power supply options, unit processes on demand by the dataset generators
- **Database scope:** future transport services, electricity and material supply
- **Data source:** based on ecoinvent data v1.3
• **Target group**: Research institutions, specialized consultancies, industry active in energy research, energy utilities, European Commission, EU National and local governments, energy agencies, etc.

• LCI modeling method: Attributional

• **Time relevance**: three time horizons: today, 2025, 2050

• **Geographical coverage**: Europe, Morocco, Germany, Global, etc.

• **Data generator**: project members (Ambiente Italia, DLR-Deutsches Zentrum für Luft- und Raumfahrt, ESU-services Ltd., IFEU Heidelberg, please name all data generators.)

**Quality**

• Reviewed level: external

• Is there a data quality score?: yes

• **Additional**: Data are designed to be used in long-term environmental technology assessment; the scenarios differ in terms of optimism towards technological improvements, cost reductions and market growth rates of the technologies under investigation: pessimistic, realistic-optimistic, very optimistic; data are established according to the ecoinvent quality guidelines and delivered in the ecoSpold Download format with the help of the ecoSpold access software.

**Source of information**


4.17. **PE International**

**Overview**

DB_11. Operator: Industry

DB_12. **Database name**: GaBi LCA Databases 2013 (collection of different databases, for different subjects)


• Provider: PE International

• Contact: gabi@pe-international.com

• Released/ last updated:

• **First version**: over 20 years ago

• **Licensing**: for purchase, on request

• Data language(s): English, German

• **Dataset number**: per database from 13 to 244 (in total over: 6500)

**Access – Download formats and accessibility**

• File type: HTML (web access)

• Download format: *.gbx

• Compatible software:
  • GaBi ([www.gabi-software.com](http://www.gabi-software.com))
• openLCA (www.openlca.org),
• Umberto (www.umberto.de)

Content – data collection, objects, background

• **Process type:** (in total) 11% unit process data sets, 89% system (or aggregated) process data sets

• **Scope of the different databases:** agriculture, building & construction, chemicals & materials, consumer goods, education, electronics & ICT, energy & utilities, food & beverage, healthcare & life sciences, industrial products, metals & mining, plastics, retail, service sector, textiles

• **Data source:** Life Cycle Inventory datasets based on primary data collection during global work with companies, associations and public bodies. System (or aggregated) processes are of course not transparent.

• **Time relevance:** 1996 - 2013

• **Geographical coverage:** Germany, United States, Global, Europe, Northern America, EU-27, many different countries

• Based on ISO 14040/14044: yes

Quality

• Reviewed by: Internal

• Is there a data quality score?: yes

Source of information

• [PE International 2014]

4.18. **Quantis Switzerland**

Overview

• **Operator:** Private consultant

• **Database name:** Quantis Water Database

• **Web-site:** http://www.quantis-intl.com/waterdatabase.php

• **Provider:** Quantis Switzerland

• **Contact:** waterdatabase@quantis-intl.com

• **Released/ last updated:** March 2012

• **Dataset number:** over 4000

• **Licensing:**

• **Data language(s):** English

Access – Download formats and accessibility

• **File type:** —

• **Download format:** Excel + Quantis-format

• **Compatible software:** Quantis software
Content – data collection, objects, background

- Process type:
- **Database scope**: Water applied processes (agriculture, chemicals, materials, water supply, energy, waste treatment)
- Data source:
- **Target group**: Water footprint practitioners
- LCI modeling method:
- Time relevance:
- **Geographical coverage**: individual countries and groups of countries (similarly as in the ecoinvent Database v2.2)
- Data types: various
- Based on ISO 14040/14044: yes

Quality

- Reviewed level:
- Is there a data quality score?:
- **Additional**: Database is a complement of the ecoinvent v2.2 for water data

Source of information

- [Quantis Switzerland 2012]

**4.19. Sichuan University, IKE Environmental Technology CO. Ltd.**

Overview

- **Operator**: Private research/consultant
- **Database name**: Chinese Life Cycle Database (CLCD)
- **Provider**: Sichuan University, China; IKE Environmental Technology CO., Ltd, China
- **Contact**: support@itke.com.cn
- **Released/last updated**: 2010-09-16 since then constantly extended
- Dataset number: 600
- **Licensing**: Free in eBalance software
- Data language(s): Chinese

Access – Download formats and accessibility

- **File type**: CLCD, Ecospold01 and ILCD format
- Compatible software: eBalance

Content – data collection, objects, background

- Process type:
- **Database scope**: Energy, metal, non-metal, chemicals, transport, waste treatment
• Data source:
• Target group:
• LCI modeling method:
• Time relevance:
• Geographical coverage: China
• Based on ISO 14040/14044: yes

Quality
• Reviewed level:
• Is there a data quality score?:

Source of information
• [GHG protocol 2012; Ping 2014]

4.20. Sostenipra

Overview
• Operator: Public-private partnership based
• Database name: LCADB.sudoe
• Web-site: lcadb.sudoe.ecotech.cat
• Provider: Sostenipra (UAB research group)
• Contact: carles@ineditinnova.com
• Released/last updated: 2013-12-15
• First version: 2013-01-01
• Licensing: free (required registration)
• Data language(s): English
• Dataset number: 72 public (after registration just 19 processes are displayed) (75 intranet)

Access – Download formats and accessibility
• File Type: Online database
• Download format: CSV, PDF
• Compatible Software: CSV - SIMAPRO

Content – data collection, objects, background
• Process type: unit process
• Database scope: agriculture, energy supply, transport, biofuels and biomaterials, bulk and specialty chemicals, construction materials, packaging materials, basic and precious metals, metals processing, ICT and electronics as well as waste treatment (FROM SUDOE AREA)
• Data source: Partners of Ecotech Sudoe Project (see in lcadb.sudoe.ecotech.cat)
• LCI modeling method: Attributional
Opportunities for national life cycle network creation and expansion around the world:

ANNEXES

- Time relevance: 2012
- Geographical coverage: SUDOE AREA (France, Portugal and Spain)
- Based on ISO 14040/14044: yes

Quality

- Reviewed level: Internal + External (There is a editor panel and a team of reviewers for each topic. The researchers are mainly the institutions involved in the initial project (INRA, UAB, U.Aveiro, etc))
- Is there a data quality score?: Yes
- Additional: detailed uncertainty \ data quality descriptions \ background data \ most

Source of information

- Information provided by database provider

4.21. ecoinvent Centre

Overview

- Operator: Public-private partnership based
- Database name: ecoinvent v3
- Web-site: http://www.ecoinvent.org
- Provider: Swiss Centre for Life Cycle Inventories (ecoinvent Centre)
- Contact: support@ecoinvent.org
- Released/last updated: 2013-05-06
- First version: 1994, contents of the ecoinvent database were published by ETHZ as “Ökoinventare für Energiesysteme”
- Licensing: 0 - 2500 € [maintenance costs variable]
- Data language(s): English
- Dataset number: over 11,000 for one system model and process type; three different system models, each dataset both as unit and aggregated processes available

Access – Download formats and accessibility

- File Type: HTML (web access)
- Download format: ecoSpold2
- Compatible Software: Basically all software able to read the ecoSpold2-format or where the database has been converted into; at present ecoinvent3 is at least available in
  - SimaPro (http://www.pre-sustainability.com/simapro),
  - openLCA (www.openlca.org),
  - Umberto (www.umberto.de)

Content – data collection, objects, background

- Process type: 100 % of datasets published both as unit process, and system (or aggregated) process
• **Database scope:** agriculture, energy supply, transport, biofuels and biomaterials, bulk and specialty chemicals, construction materials, packaging materials, basic and precious metals, metals processing, ICT and electronics as well as waste treatment

• **Data source:**  industrial data; compiled by internationally renowned research institutes and LCA consultants

• **LCI modeling method:** attributional, consequential


• **Geographical coverage:** 349 detailed geography data; individual countries, the continents Asia and Europe, the UN regions and sub-regions, Global

• Based on ISO 14040/14044: yes

**Quality**

• **Reviewed level:** Internal + External (new data passed three editors (editor list on Web-site))

• Is there a data quality score?: yes

• **Additional:** detailed uncertainty \ data quality descriptions \ background data \ most relevant, reliable, transparent and accessible LCI data for users worldwide.

**Source of information**

• [Weidema et al. 2013; ecoinvent 2014; Levova 2013]

**4.22. Umweltbundesamt (Federal Environmental Agency Germany)**

**Overview**

• **Operator:** State-driven body

• **Database name:** ProBas (Process-oriented basic data for eco-management instruments)

• **Web-site:** [http://www.probas.umweltbundesamt.de](http://www.probas.umweltbundesamt.de)

• **Provider:** Federal Environment Agency - Germany

• **Contact:** Marina Köhn, probas@uba.de; Uwe R. Fritsche (project leader), uf@iinas.org

• Released/ last updated: 2013-12-16

• First versions:

• Dataset number: over 8000

• Licensing: free

• Data language(s): German

**Access – Download formats and accessibility**

• **File type:** HTML (web access)

• **Download format:** *.pdf, *.xml (ProBas-XML)

• Compatible software: openLCA, available partially in Gemis

**Content – data collection, objects, background**

• **Process type:** both system and unit processes
• **Database scope:** Energy carrier and supply, materials and products, transport, waste management, other services

• **Data source:** Various ProBas-projects (performed by Umweltbudesamt, Öko-Institut, Wuppertal-Institut, Fraunhofer Institut, etc.)

• Target group:

• LCI modeling method:

• Time relevance: 1995-2030

• Geographical coverage: Germany, Global

• **Data types:** generic, process-specific

• Based on ISO 14040/14044: yes

**Quality**

• Reviewed level:

• Is there a data quality score?:

**Source of information**

• [Umweltbudesamt 2014]

4.23. **University of Waterloo**

**Overview**

• Operator: National

• **Database name:** Canadian Raw Materials Database (CRMD)

• **Web-site:** [http://crmd.uwaterloo.ca/eng.html](http://crmd.uwaterloo.ca/eng.html)

• **Provider:** University of Waterloo, Environment Canada, Environment and Plastics Industry Council

• **Contact:** Murray Haight, mehaight@uwaterloo.ca

• **Released:** around November 2000

• Dataset number: 18

• **Licensing:** Free (with registration)

• Data language(s): English, French

**Access – Download formats and accessibility**

• **File type:** HTML (web access)

• Download format: *.pdf

• Compatible software:

**Content – data collection, objects, background**

• Process type:

• **Database scope:** Metals and semi-metals, Glass and ceramics, Plastics, Wood

• **Data source:** Industry statistics
• **Target group:** small and medium-sized manufacturers, converters, formulators and other users to support their voluntary efforts in improving the environmental performance of their products

• **Data generator:** Aluminium, glass container, plastics, steel, wood products industries

• LCI modeling method:

• Time relevance: 1998 - 2000

• Geographical coverage: Canada

• **Data types:** Industry statistics

• Based on ISO 14040/14044: yes

**Quality**

• Reviewed level:

• Is there a data quality score?:

**Source of information**

- [CRMD website 2002, GHG protocol 2012]
About the Life Cycle Initiative

The Global Life Cycle Initiative was established by UNEP and SETAC. Among other things, the Life Cycle Initiative builds upon and provides support to the on-going work of UNEP on sustainable consumption and production, such as Industry Outreach, Industrial Pollution Management, Sustainable Consumption, Cleaner and Safer Production, Global Reporting Initiative (GRI), Global Compact, UN Consumer Guidelines, Tourism, Advertising, Eco-design and Product Service Systems.

The Initiative’s efforts are complemented by SETAC’s international infrastructure and its publishing efforts in support of the LCA community.

The Life Cycle Initiative is a response to the call from governments for a life cycle economy in the Malmö Declaration (2000). It contributes to the 10-year framework of programmes to promote sustainable consumption and production patterns, as requested at the World Summit on Sustainable Development (WSSD) in Johannesburg (2002).

The Life Cycle Initiative’s vision is a world where life cycle approaches are mainstreamed and its mission is to enable the global use of credible life cycle knowledge for more sustainable societies.

Our current work is building on the Life Cycle Initiative’s continual strength to maintain and enhance life cycle assessment and management methodologies and build capacity globally. As we look to the future, Life Cycle Assessment (LCA) and Life Cycle Management (LCM) knowledge is the Life Cycle Initiative’s anchor, but we will advance activities on LCA and LCM to make a difference within the real world.

Therefore, the renewed objectives are the following:

Objective 1: Enhance the global consensus and relevance of existing and emerging life cycle methodologies and data management;

Objective 2: Expand capability worldwide to apply and to improve life cycle approaches; making them operational for organisations;

Objective 3: Communicate current life cycle knowledge and be the global voice of the Life Cycle community to influence and partner with stakeholders.

For more information,
www.lifecycleinitiative.org
Sponsors and Strategic Partners of the UNEP/SETAC Life Cycle Initiative

Platinum Sponsors

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Strategic Supporting Partners

African LCA Network (ALCANET); Association for Life Cycle Assessment in Latin America (ALCALA); Federation of Indian Chamber of Commerce and Industries (FICCI); Ibero-American Network of LCA; Indian LCA Society; ISO; Sichuan University
About SETAC

The Society of Environmental Toxicology and Chemistry (SETAC) is a professional society in the form of a not-for-profit association, established to promote the use of a multidisciplinary approach to solving problems of the impact of chemicals and technology on the environment. Environmental problems often require a combination of expertise from chemistry, toxicology, and a range of other disciplines to develop effective solutions. SETAC provides a neutral meeting ground for scientists working in universities, governments, and industry who meet, as private persons not bound to defend positions, but simply to use the best science available.

Among other things, SETAC has taken a leading role in the development of Life Cycle Management (LCM) and Life Cycle Assessment (LCA).

The organization is often quoted as a reference on LCA matters.

For more information, 
www.setac.org
About the UNEP Division of Technology, Industry and Economics (DTIE)

Set up in 1975, three years after UNEP, the Division of Technology, Industry and Economics (DTIE) provides solutions to decision-makers and helps change the business environment by offering platforms for multi-stakeholder dialogue and cooperation, innovative policy options, pilot projects and creative market mechanisms to improve the quality of the environment and the well-being of citizens.

Within UNEP, DTIE has the mandate of delivering on environmental sustainability through technology, industry and economic policy by addressing environmental issues at global and regional levels, providing leadership and encouraging partnerships, and by informing and enabling nations and people to improve their quality of life without compromising that of future generations.

DTIE plays a leading role in three of UNEP’s seven strategic priorities, namely in climate change, chemicals and waste, and resource efficiency.

The Office of the Director, located in Paris, coordinates activities through:

• The Chemicals and Waste Branch (Geneva, Paris and Osaka), which catalyses global actions to bring about the sound management of chemicals, the improvement of chemical safety and the management of waste.

• The International Environmental Technology Centre - IETC (Osaka) promotes the collection and dissemination of knowledge on Environmentally Sound Technologies with a focus on waste management. The broad objective is to enhance the understanding of converting waste into a resource and thus reduce impacts on human health and the environment (land, water and air).

• OzonAction (Paris) supports the phase-out of ozone depleting substances in developing countries and countries with economies in transition to ensure implementation of the Montreal Protocol.

• The Economy and Trade Branch (Geneva), which helps countries to integrate environmental considerations into economic and trade policies, and works with the finance sector to incorporate sustainable development policies. This branch is also charged with producing green economy reports.

• The Energy, Climate, and Technology Branch (Paris, Nairobi, and Copenhagen), which fosters energy and transport policies for sustainable development and encourages investment in renewable energy and energy efficiency.

• The Sustainable Lifestyles, Cities and Industry Branch (Paris), which delivers support to the shift to sustainable consumption and production patterns as a core contribution to sustainable development.

DTIE works with many partners (other UN agencies and programmes, international organizations, governments, non-governmental organizations, business, industry, the media and the public) to raise awareness, improve the transfer of knowledge and information, foster technological cooperation and implement international conventions and agreements.

For more information,  
www.unep.org/dtie
Based on an introduction setting the scene for life cycle approaches from an international perspective and a global survey answered in average by more than 10% of the more than 2,500 members of the mailing list of the UNEP/SETAC Life Cycle Initiative, this report describes the opportunities for national life cycle networks creation and expansion around the world.

A special focus is given on analysing the status of mainstreaming life cycle approaches, comprising especially also Life Cycle Assessment (LCA) database development, in G20 plus Switzerland and a few selected emerging economies.

The report concludes that mainstreaming is on-going and that having a life cycle network of certain maturity goes hand in hand with the development of a LCA database. A strong correlation is observed between having a national life cycle network with a legal entity and the probability of creating a LCA database; the survey also shows that a lot of countries have plans to develop a LCA database, while those who lack a networks also don’t have plans to develop a LCA database. Using the results of the study, concrete recommendations are provided, including guiding principles for LCA network creation and next steps for LCA database development around the world.